

Well type	Extended-reach, dual lateral, trilateral, and quad-lateral
Well environment	Land and offshore
Connector size	9% × 4½ in, 10% × 4½ in

Background

Hydraulic line wet-mate (HLWM) connectors facilitate deployment of a multitrip completion equipped with hydraulic equipment—such as interval control valves and isolation valves—in the lower completion and an ESP in the upper completion.

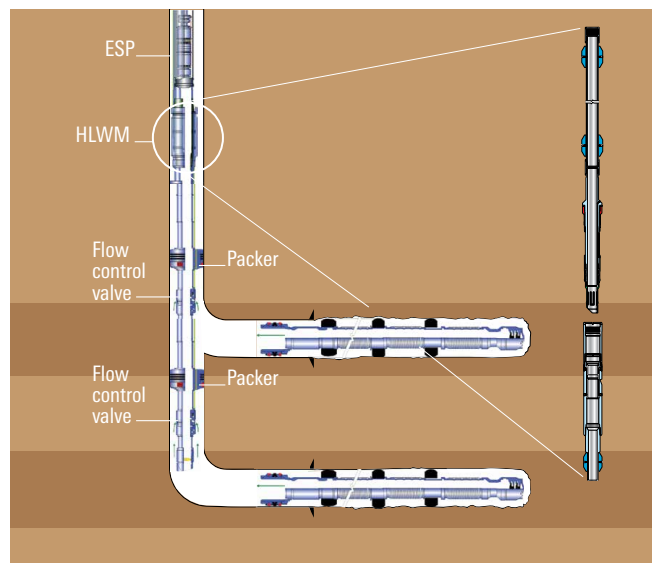
The connector comprises a receptacle and a stinger, which are run with the lower and upper completion respectively. The concentric design eliminates the need for any orientation downhole when stinging into the lower completion. This key feature makes the system reliable and easy to use in highly deviated to horizontal wells. The stinger can be disconnected by a straight upward pull, enabling retrieval of the upper completion (e.g., to repair or replace the ESP) without removing the lower completion, which is especially useful in extended-reach and other long wells.

Technology

- HLWM connectors

Over 170 Hydraulic Line Wet-Mate Connectors Installed

Robust system enables cost-effective integration of an intelligent completion with an ESP in multistage wells, including multilaterals



More than 170 connectors have been deployed to date, in wells with MD ranging from 18,000 to 28,000 ft [5,486 to 8,534 m], including multilateral wells where intelligent completions provide junction control. In >30 wells, the upper completion has been retrieved and the ESP replaced—sometimes more than once—without removing the lower completion. Operators are

- saving significant rig time and equipment and other costs and reducing risk
- avoiding the formation damage caused by workover operations
- reducing deferred production.

The stinger can be reliably disconnected from and reconnected to the receptacle multiple times. Read [SPE 182846](#) and [SPE 149057](#) for more details.